

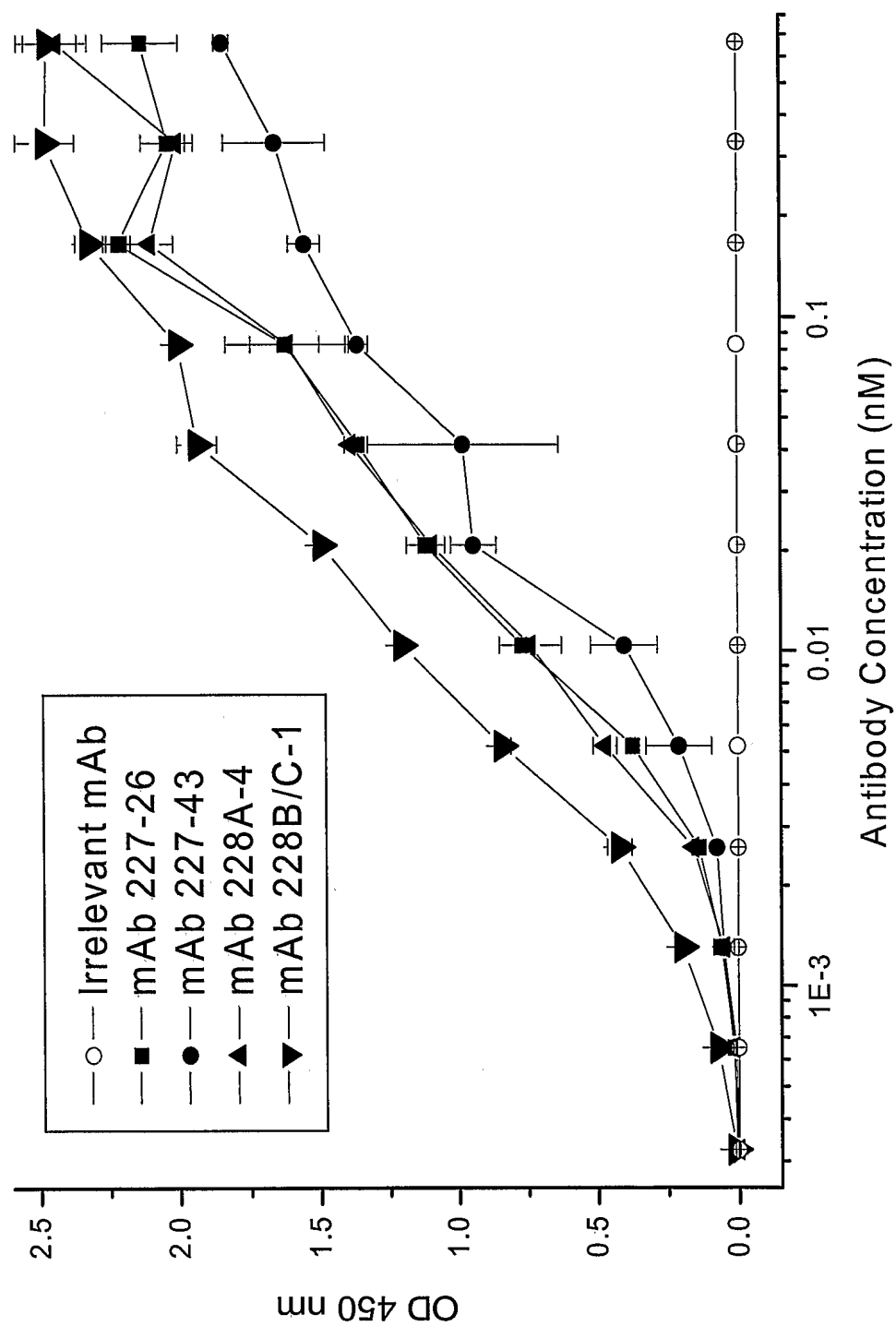
Fig. 1 Binding of anti-IL13 mAbs to human IL-13 in ELISA

Fig. 2 Binding of anti-IL13 mAbs to MT-IL13/Fc

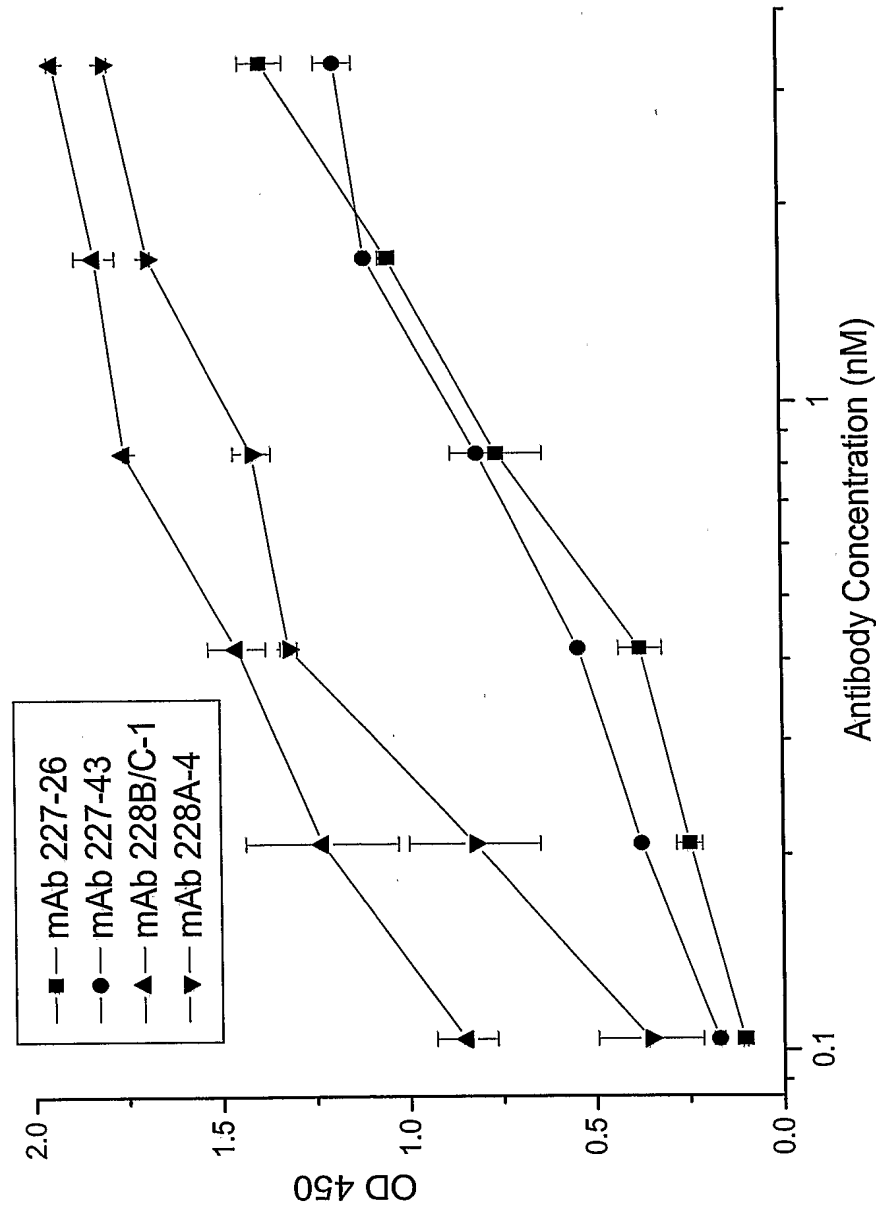


Fig. 3 Anti-IL 13 mAb JES10-5A2 does not compete with the binding of mAb 228B/C-1-HRP to Human IL-13 in ELISA

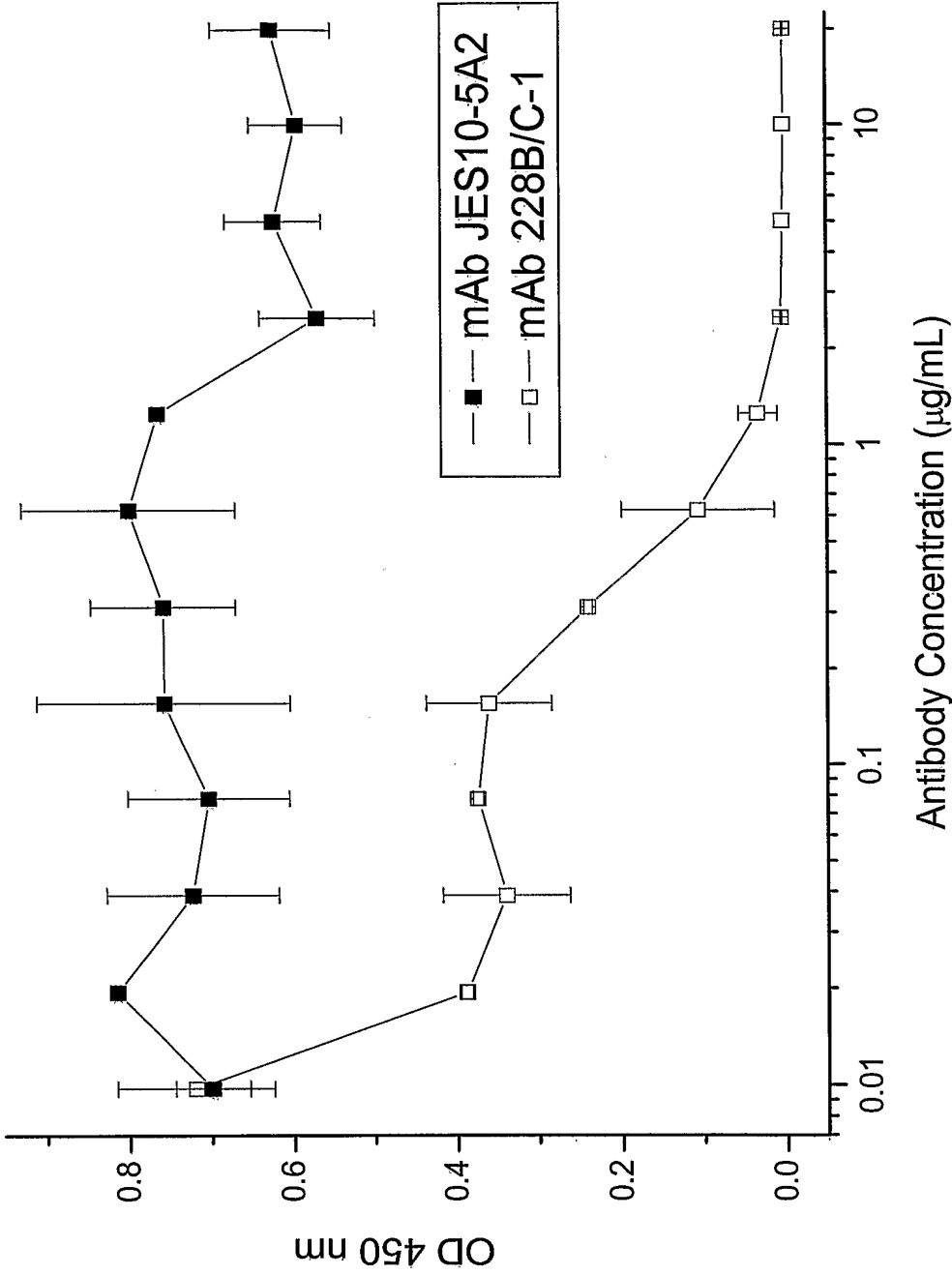


Fig. 4 Effect of anti-IL 13 mAbs on the proliferation of L-1236 cells

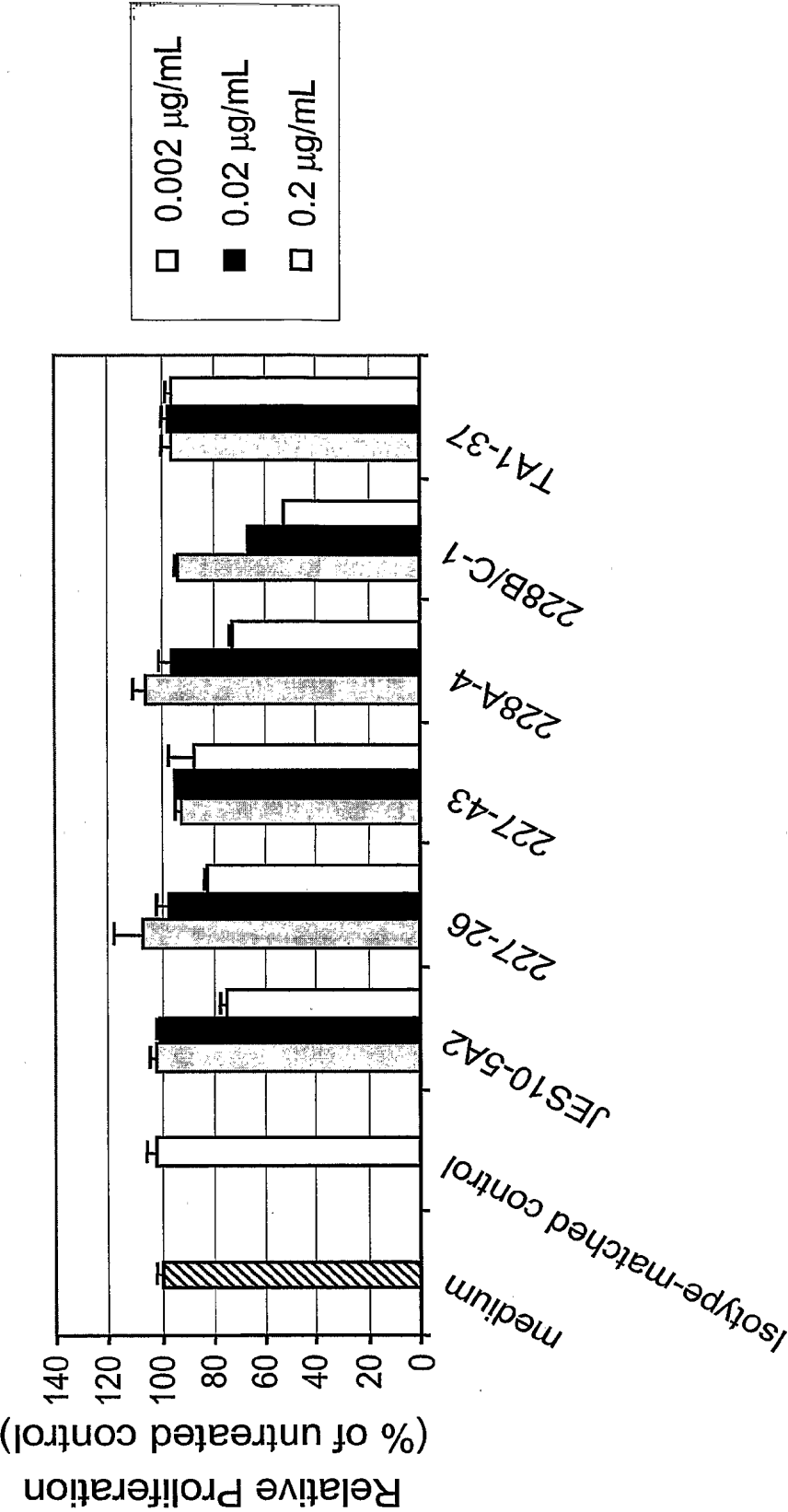


Fig. 5 Effect of anti-IL13 mAbs on IL13-induced suppression of CD14 expression in human monocytes

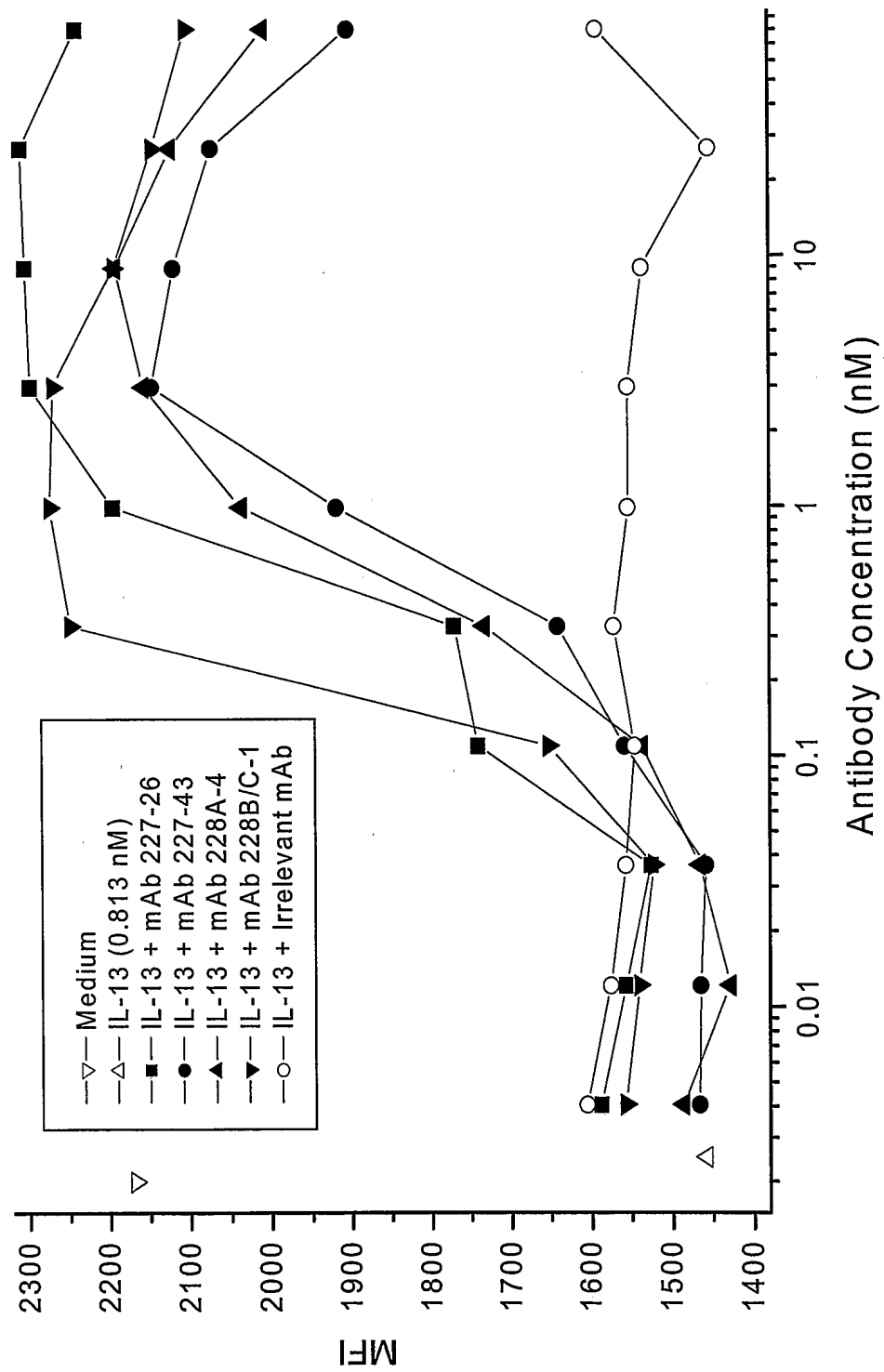


Fig. 6 Effect of anti-IL 13 mAbs on IL13-induced upregulation of CD23 expression in human monocytes

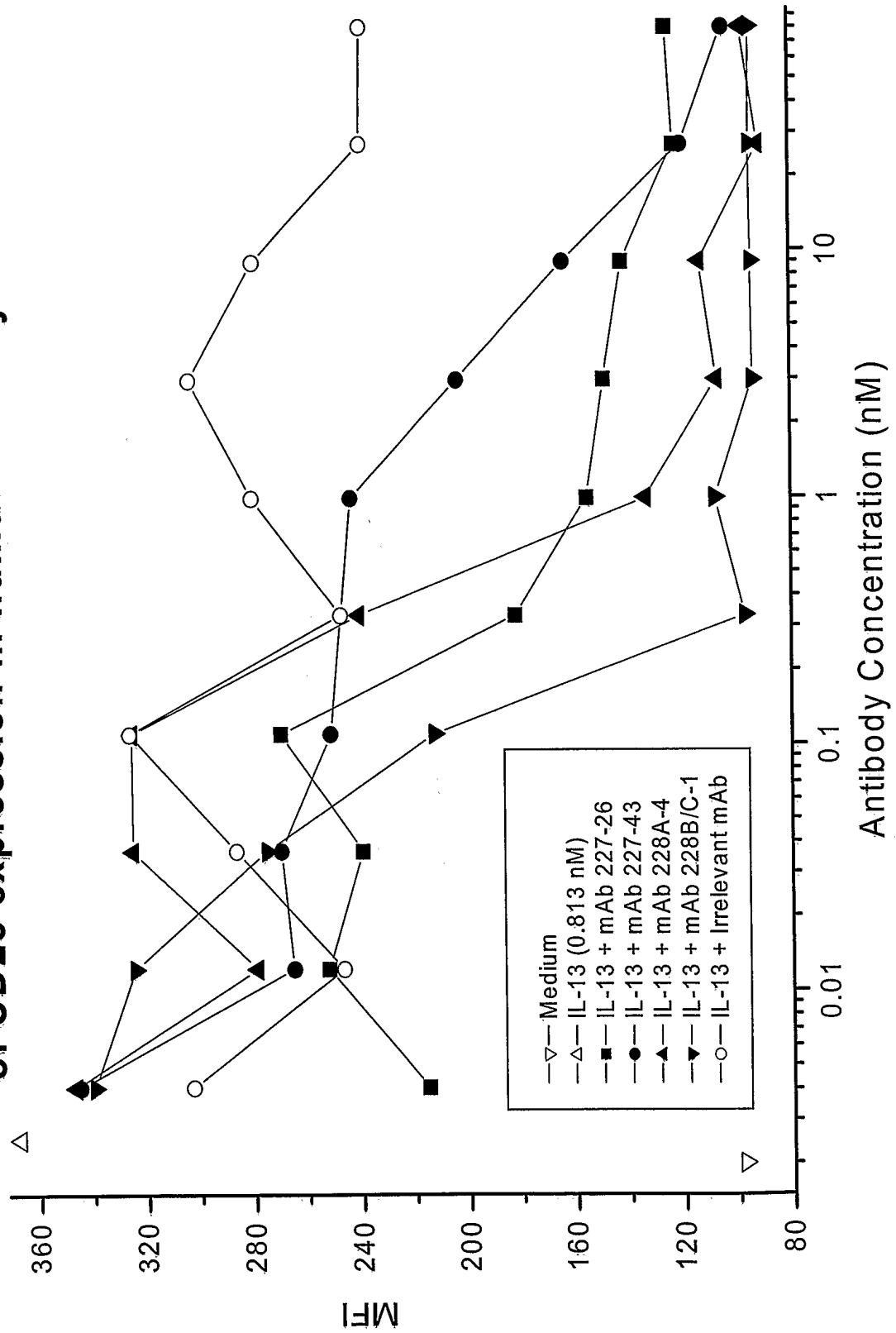


Fig. 7 Anti-IL13 mAbs Inhibit IL13-Induced Stat6 Phosphorylation in THP-1 Cells

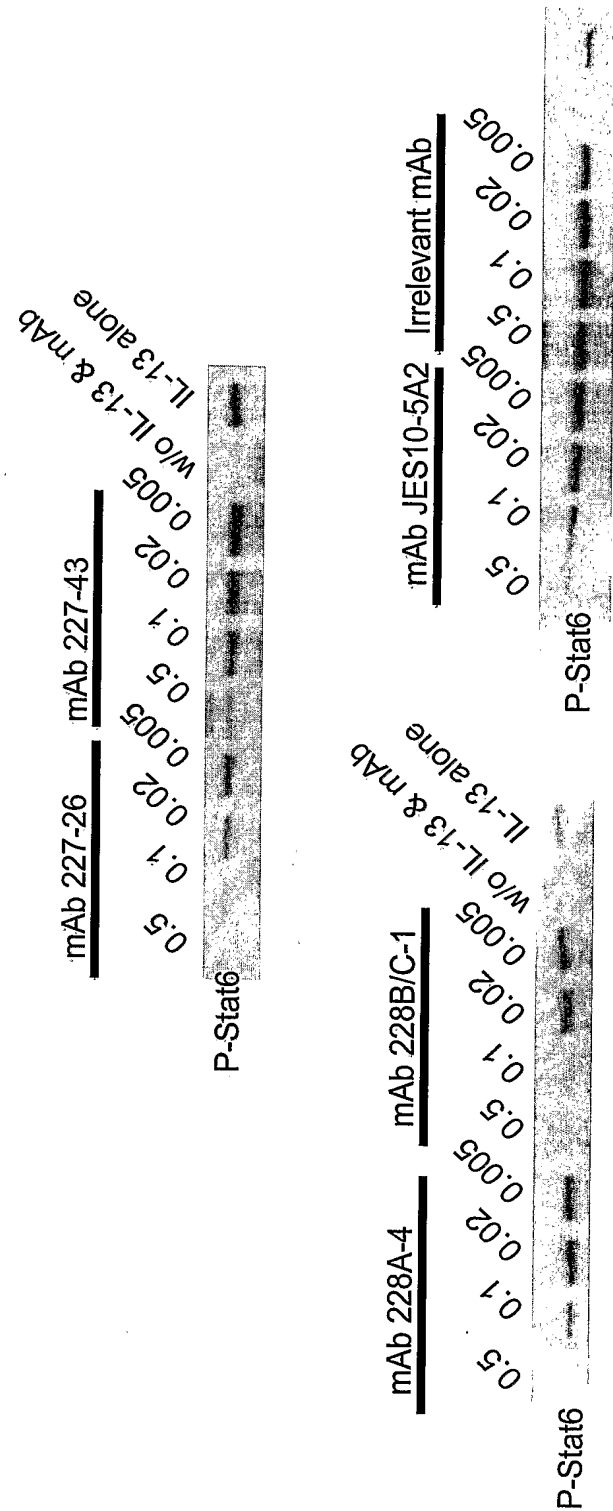


FIGURE 8**228B/C-1 Antibody
Heavy Chain (VH)**

```

1  Q V Q L Q E S G P G L V A P S Q S L S I T C T V S G F S L N A Y S V N W V
      10      20      30
40  R Q P P G K G L E W L G M I W G D G K I V Y N S A L K S R L N I S K D S S
      50 52a 53      60      65      70
80  K S Q V F L K M S S L Q S D D T A R Y Y C A G D G Y Y P Y A M D N W G H G T
      90      95      100 b c d e f 101
118 S V T V S S (SEQ ID NO 4)

```

Light Chain (VK)

```

10  N I V L T Q S P A S L A V S L G Q R A T I S C R A S K S V D S Y G N S F M H W
      20      30
40  Y Q Q K P G Q P P K L L I Y L A S N L E S G V P A R F S G S G S R T D F T L T I
      50      60      70
80  D P V E A D D A A S Y Y C Q Q N N E D P R T F G G G T K L E I K R A (SEQ ID NO 3)
      90      100      113

```

Underlined: Kabat CDR. Bold/Italic: Chothia CDR1.

FIGURE 9
228A-4 Antibody
Heavy Chain (VH)

FIGURE 10
227-26 Antibody
Heavy Chain (VH)

```

1      10      20      30
Q V Q L Q Q S G D D L V L P G A S V K L S C K A S G Y T F T S Y W I N W I
40      50 52a 53      60      65      70
K Q R P G Q G L E W I G H I A P G S G S T Y F N E M F K G K A T L T V D T
80      90      95      100 b c d e f
S S S T A Y I Q L S S L S S E D S A V Y F C A R S D I F L S Y A M D Y W G Q
118
G T S V T V S S      (SEQ ID NO 8)

```

Light Chain (VK)

```

1      10      20      30
D V L M T Q T P L S L P V S L G D Q A S I S C R S S Q S I V H S N G N T Y L Q
40      50      60      70
W Y L Q K P G Q S P K L L I Y K V S N R F S G V P D R F S G S G S G T D F T L K
80      90      100      114
I S R V E A E D L G V Y Y C F Q G S H V P Y T F G G G T K L E I K R A      (SEQ ID NO 7)

```

Underlined: Kabat CDR. Bold/Italic: Chothia CDR1.

FIGURE 11 A

VK CHAIN

SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ ID NO			SEQ 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SEQ ID NO

FIGURE 11 C

[illegible]

HT2-0027 #1	HT2-0027 #2	HT2-0027 #3	HT2-0027 #4	HT2-0027 #5	HT2-0027 #6	HT2-0027 #7	HT2-0027 #8	HT2-0027 #9	HT2-0027 #10	HT2-0027 #11	HT2-0027 #12	HT2-0027 #13	HT2-0027 #14	HT2-0027 #15	HT2-0027 #16	HT2-0027 #17	HT2-0027 #18	HT2-0027 #19	HT2-0027 #20	HT2-0027 #21	HT2-0027 #22	HT2-0027 #23	HT2-0027 #24	HT2-0027 #25	HT2-0027 #26	HT2-0027 #27	HT2-0027 #28	HT2-0027 #29	HT2-0027 #30	HT2-0027 #31	HT2-0027 #32	HT2-0027 #33	HT2-0027 #34	HT2-0027 #35	HT2-0027 #36	HT2-0027 #37	HT2-0027 #38	HT2-0027 #39	HT2-0027 #40	HT2-0027 #41	HT2-0027 #42	HT2-0027 #43	HT2-0027 #44	HT2-0027 #45	HT2-0027 #46	HT2-0027 #47	HT2-0027 #48	HT2-0027 #49	HT2-0027 #50	HT2-0027 #51	HT2-0027 #52	HT2-0027 #53	HT2-0027 #54	HT2-0027 #55	HT2-0027 #56	HT2-0027 #57	HT2-0027 #58	HT2-0027 #59	HT2-0027 #60	HT2-0027 #61	HT2-0027 #62	HT2-0027 #63	HT2-0027 #64	HT2-0027 #65	HT2-0027 #66	HT2-0027 #67	HT2-0027 #68	HT2-0027 #69	HT2-0027 #70	HT2-0027 #71	HT2-0027 #72	HT2-0027 #73	HT2-0027 #74	HT2-0027 #75	HT2-0027 #76	HT2-0027 #77	HT2-0027 #78	HT2-0027 #79	HT2-0027 #80	HT2-0027 #81	HT2-0027 #82	HT2-0027 #83	HT2-0027 #84	HT2-0027 #85	HT2-0027 #86	HT2-0027 #87	HT2-0027 #88	HT2-0027 #89	HT2-0027 #90	HT2-0027 #91	HT2-0027 #92	HT2-0027 #93	HT2-0027 #94	HT2-0027 #95	HT2-0027 #96	HT2-0027 #97	HT2-0027 #98	HT2-0027 #99	HT2-0027 #100
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[illegible]

FIGURE 13 A

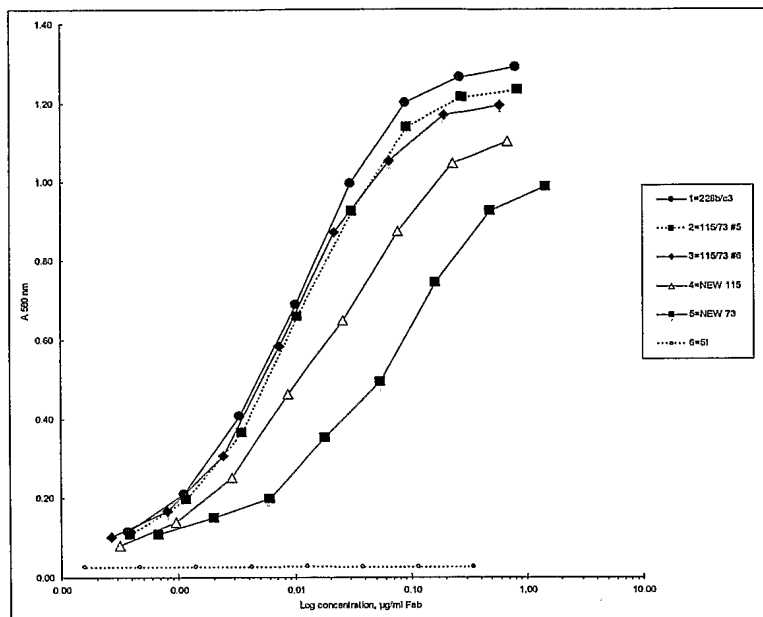


FIGURE 13 B

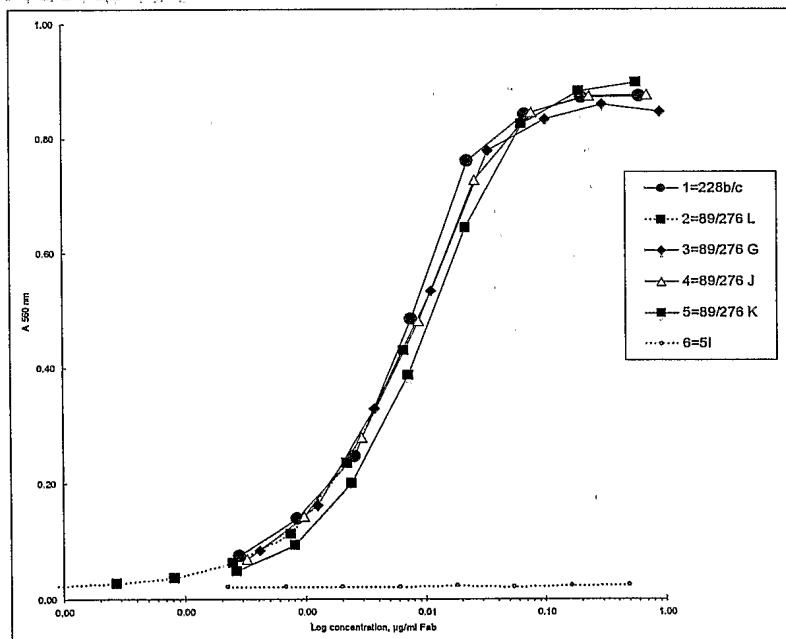


FIGURE 13 C

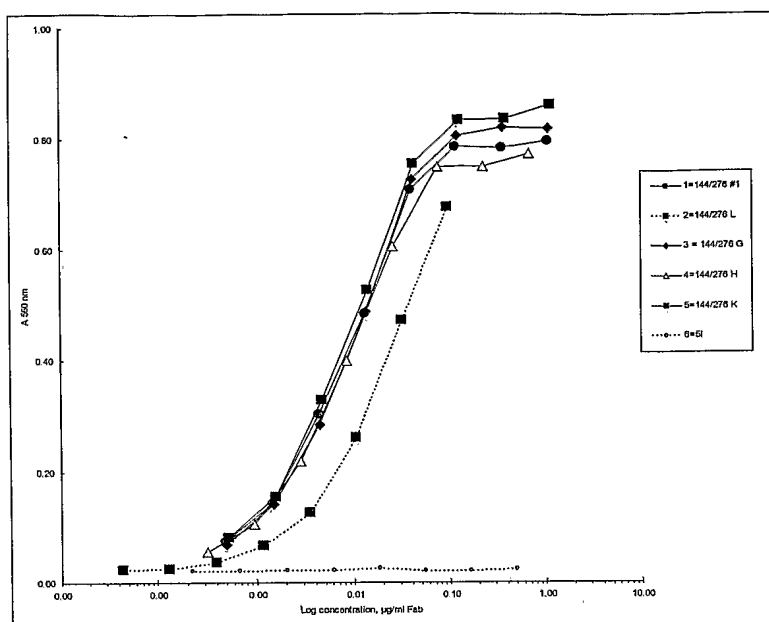


FIGURE 13 D

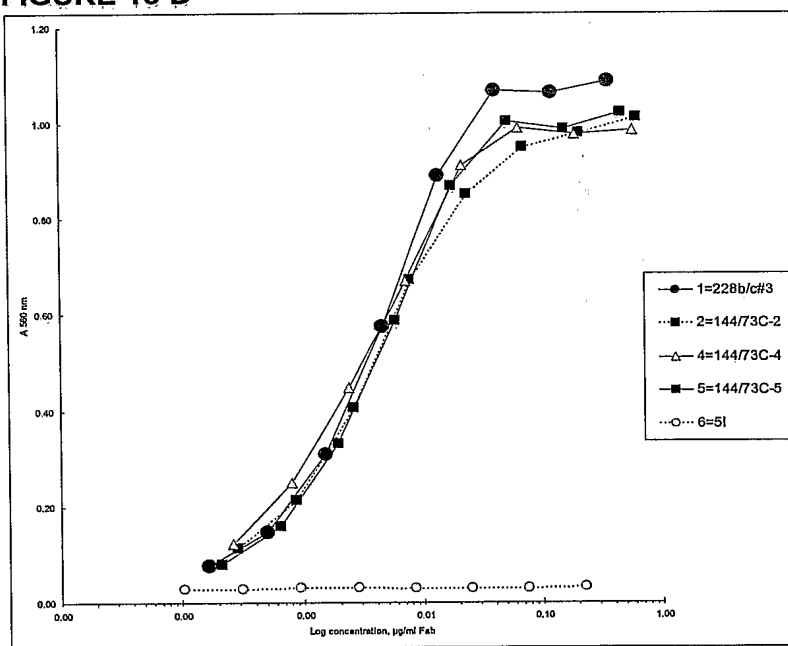


FIGURE 14 A

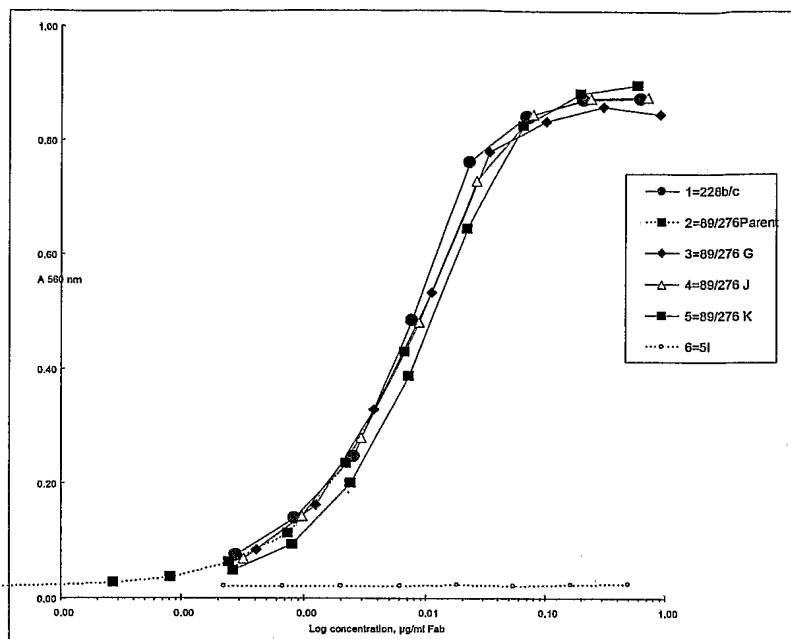


FIGURE 14B

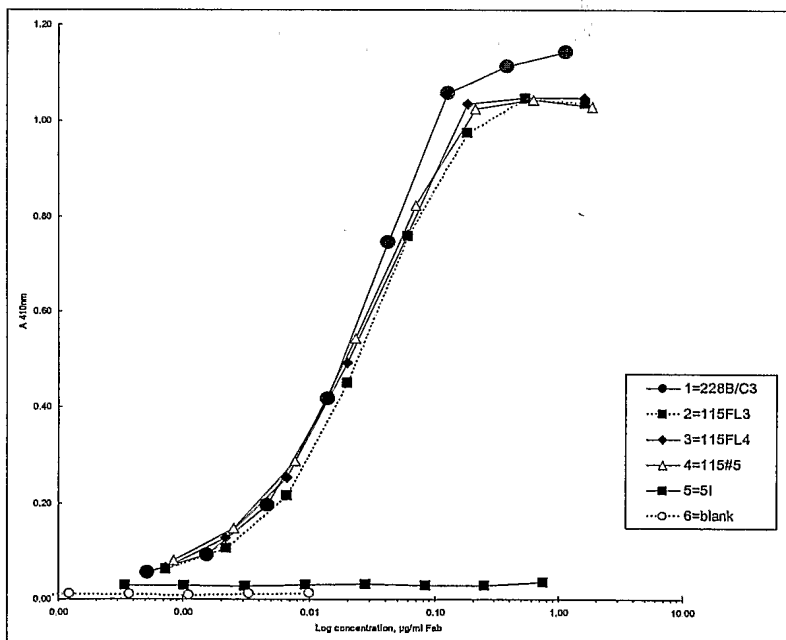


FIGURE 15

L1-59 (parent)															
CDR-L1	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-5	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-13	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-42	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-48	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-50	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-56	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-65	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-69	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-82	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
CL-94	R	A	S	K	S	V	D	S	Y	G	Q	S	F	M	H
L1-59 (parent)															
CDR-L3	Q	Q	N	N	E	D	P	R	T						
CL-5	Q	Q	N	A	E	D	P	R	T						
CL-13	Q	Q	N	N	E	D	P	R	T						
CL-42	Q	Q	N	A	E	D	P	R	T						
CL-48	Q	Q	N	N	E	D	P	R	T						
CL-50	Q	Q	N	A	E	D	P	R	T						
CL-56	Q	Q	N	A	E	D	P	R	T						
CL-65	Q	Q	N	N	E	D	P	R	T						
CL-69	Q	Q	N	A	E	D	P	R	T						
CL-82	Q	Q	N	N	E	D	P	R	T						
CL-94	Q	Q	N	A	E	D	P	R	T						
L1-59 (parent)															
CDR-H1	A	Y	S	V	N										
CL-5	A	Y	S	V	N										
CL-13	A	K	S	V	N										
CL-42	A	N	S	V	N										
CL-48	A	N	S	V	N										
CL-50	A	K	S	V	N										
CL-56	A	K	S	V	N										
CL-65	A	S	S	V	N										
CL-69	A	N	S	V	N										
CL-82	A	N	S	V	N										
CL-94	A	N	S	V	N										
L1-59 (parent)															
CDR-H3	D	G	Y	Y	P	Y	A	M	D	N					
CL-5	D	G	Y	Y	P	Y	A	M	K	N					
CL-13	D	G	Y	Y	P	Y	A	M	S	N					
CL-42	D	G	Y	Y	P	Y	A	M	K	N					
CL-48	D	G	Y	Y	P	Y	A	M	K	N					
CL-50	D	G	Y	Y	P	Y	A	M	K	N					
CL-56	D	G	Y	Y	P	Y	A	M	S	N					
CL-65	D	G	R	Y	P	Y	A	M	K	N					
CL-69	D	G	Y	Y	P	Y	A	M	D	N					
CL-82	D	G	Y	Y	P	Y	A	M	K	N					
CL-94	D	G	Y	Y	P	Y	A	M	K	N					

FIGURE 16

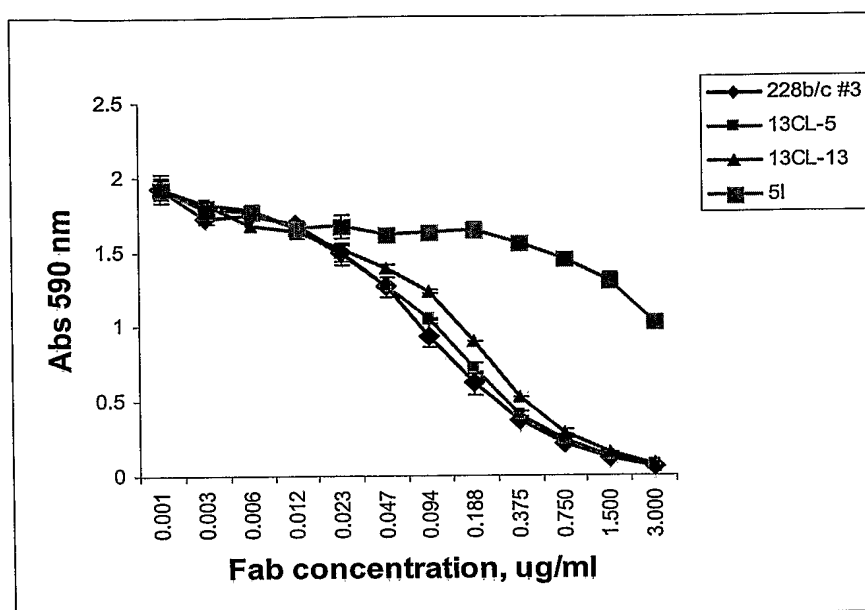


Figure 17 Variable Region Amino Acid Sequences for anti-IL13 CandidatesCL-5 (Affinity Matured Candidate) Vk:

DIVMTQSPDLSVSLGERATINCRASKSVDSYGQSFMHWYQQKPGQPPKLLIYLASNLESGVPDRFSGSGGTDF
 LTISSLQAEDVAVYYCQQNAEDPRTFGGGTKVEIKR (SEQ ID NO 93)

CL-5 (Affinity Matured Candidate) Vh:

QVTLRESGPALVKPTQTLTCTGSGFSLAYSVNWIRPPGKALEWLA MIWGDGKIVYNSALKSRLLTISKDTSKN
 QVVLTMNMDPVDATYYCAVDGYYPYAMKNWGQGS LVTVSS (SEQ ID NO 94)

CL-13 (Affinity Matured Candidate) Vk:

DIVMTQSPDLSVSLGERATINCRASKSVDSYGQSFMHWYQQKPGQPPKLLIYLASNLESGVPDRFSGSGGTDF
 LTISSLQAEDVAVYYCQQNNEDPRTFGGGTKVEIKR (SEQ ID NO 95)

CL-13 (Affinity Matured Candidate) Vh:

QVTLRESGPALVKPTQTLTCTGSGFSLAKSVNWIRPPGKALEWLA MIWGDGKIVYNSALKSRLLTISKDTSKN
 QVVLTMNMDPVDATYYCAVDGYYPYAMSNWGQGS LVTVSS (SEQ ID NO 96)

CL-50 (Affinity Matured Candidate) Vk:

DIVMTQSPDLSVSLGERATINCRASKSVDSYGQSFMHWYQQKPGQPPKLLIYLASNLESGVPDRFSGSGGTDF
 LTISSLQAEDVAVYYCQQNAEDPRTFGGGTKVEIKR (SEQ ID NO 97)

CL-50 (Affinity Matured Candidate) Vh:

QVTLRESGPALVKPTQTLTCTGSGFSLAKSVNWIRPPGKALEWLA MIWGDGKIVYNSALKSRLLTISKDTSKN
 QVVLTMNMDPVDATYYCAVDGYYPYAMKNWGQGS LVTVSS (SEQ ID NO 98)

FIGURE 20

CDR-L1			CDR-H1		
P	RASKSVDSYGNSFMH	SEQ ID NO 99	P	AYSVN	SEQ ID NO 117
V1	RASKSVDSYGQSFMH	SEQ ID NO 100	V1	AKSVN	SEQ ID NO 118
V2	RASKSVDSYGQSFLH	SEQ ID NO 101	V2	ANSVN	SEQ ID NO 119
V3	RASKSVDSYGNSYMH	SEQ ID NO 102	V3	GYSVN	SEQ ID NO 120
V4	RASKSVDSYGNSFLH	SEQ ID NO 103	V4	AHSVN	SEQ ID NO 121
			V5	ARSVN	SEQ ID NO 122
CDR-L2			CDR-H2		
P	LASNLES	SEQ ID NO 104	P	MIWGDGKIVYNSALKS	SEQ ID NO 123
V1	LASNLS	SEQ ID NO 105	V1	MIWGDGKISYNSALKS	SEQ ID NO 124
V2	LASNLOS	SEQ ID NO 106	V2	MIWGDGKIVYNSALES	SEQ ID NO 125
V3	LATNLES	SEQ ID NO 107	V3	MIWGDGKIVYNSALKS	SEQ ID NO 126
V4	LASNLS	SEQ ID NO 108	V4	MIWGDGKIVYNSDLKS	SEQ ID NO 127
V5	LASNLEK	SEQ ID NO 109	V5	MIWGDGKVVYNSALKS	SEQ ID NO 128
V6	LASRLS	SEQ ID NO 110	V6	MIWGDGKIVYNSALKS	SEQ ID NO 129
V7	LASNLHS	SEQ ID NO 111	V7	MIWGDGKIAVYNSALKS	SEQ ID NO 130
V8	LASNLSS	SEQ ID NO 112	V8	MIWGDGKIVYNSALKE	SEQ ID NO 131
V9	LASFLES	SEQ ID NO 113	V9	MIWGDGKIVYNSALKS	SEQ ID NO 132
V10	LANNLES	SEQ ID NO 114	V10	MIWGDGKIVYNSALAS	SEQ ID NO 133
			V11	MIWGDGKKVYNSALKS	SEQ ID NO 134
CDR-L3			CDR-H3		
P	QQNEDPRT	SEQ ID NO 115	P	DGYYPYAMDN	SEQ ID NO 135
V1	QQNAEDPRT	SEQ ID NO 116	V1	DGRYPYAMDN	SEQ ID NO 136
			V2	DGYYPYAMKN	SEQ ID NO 137
			V3	DGRYPYAMKN	SEQ ID NO 138
			V4	DGYYPYAMSN	SEQ ID NO 139
			V5	DGYYPYAMAN	SEQ ID NO 140
			V6	DGYYPYALDN	SEQ ID NO 141

FIGURE 21A: Variable Region Amino Acid Sequences for certain anti-IL 13 Candidates:CL-89 Vk (SEQ ID NO: 142):

DIVMTQSPDLSVSLGERATINCRASKSVDSYGN~~SF~~MHWYQQKPGQP~~PKLLIYLASNLES~~GVDPDRFSGSGSGT
DFTLTISSLQAEDVAVYYCQ~~QNNEDPRI~~FGGGTKVEIKR

CL-276G Vh (SEQ ID NO 143):

QVTLRESGPALVKPTQTTLTCTVSGFSL~~SAYSVNWIRQPPGKALEWLAMIWGDGKIVYNSALKSR~~LTISKDTS
KNQVVLTM~~TNMDPVD~~TATY~~CAGDGYYPYAMD~~NWGGGSLVTSS

RL-36 (Random Library Candidate) Vk (SEQ ID NO 144):

DIVMTQSPDLSVSLGERATINCRASKSVDSYGN~~SF~~MHWYQQKPGQP~~PKLLIYLASNLES~~GVDPDRFSGSGSGT
DFTLTISSLQAEDVAVYYCQ~~QNNEDPRI~~FGGGTKVEIKR

RL-36 (Random Library Candidate) Vh (SEQ ID NO 145):

QVTLRESGPALVKPTQTTLTCTGSGFSL~~SAYSVNWIRQPPGKALEWLAMIWGDGKIVYNSALKSR~~LTISKDTS
KNQVVLTM~~TNMDPVD~~TATY~~CAGDGYYPYAMD~~NWGGGSLVTV
SS

RL-19 (Random Library Candidate) Vh (SEQ ID NO 146):

QVTLRESGPALVKPTQTTLTCTSSGFSLS~~SAYSVNWIRQPPGKALEWLAMIWGDGKIVYNSALKSR~~LTISKDTS
KNQVVLTM~~TNMDPVD~~TATY~~CALDGYYPYAMD~~NWGGGSLVTV
SS

FIGURE 21B: Variable Region Amino Acid Sequences for certain anti-IL 13 Candidates:

RL-11 (Random Library Candidate) Vh (SEQ ID NO 147):

QVTLRESGPALVKPTQTTLTCTTSGFSLAYSVNWIRQPPGKALEWLA MIWGDGKIVYNSALKSR~~LTISKDTS~~
 KNQVVLTM~~TNMDPVD~~TATYCAVDGYYPYAMD~~NWGGSLVTV~~
 SS

RL-8 (Random Library Candidate) Vh (SEQ ID NO 148):

QVTLRESGPALVKPTQTTLTCTTSGFSLAYSVNWIRQPPGKALEWLA MIWGDGKIVYNSALKSR~~LTISKDTSK~~
 NQVVLTM~~TNMDPVD~~TATYCASDGYYPYAMD~~NWGGSLVTV~~
 SS

RL-45 (Random Library Candidate) Vh (SEQ ID NO 149):

QVTLRESGPALVKPTQTTLTCTTSGFSLAYSVNWIRQPPGKALEWLA MIWGDGKIVYNSALKSR~~LTISKDTS~~
 KNQVVLTM~~TNMDPVD~~TATYCATDGYYPYAMD~~NWGGSLVTV~~
 SS

RL36-L1.59 (L1 Affinity Matured Candidate) Vk (SEQ ID NO 150):

DIVMTQSPDLSVSLGERATINCRASKSVDSYGQSF~~FMHWYQQKPGQPPKLLIYLASNLESGVPDRFSGSGSGT~~
 DFTLTISLQAEDVAVYYCQQNNEDPR~~TFGGG~~TKVEIKR

RL36-L1.59 (L1 Affinity Matured Candidate) Vh (SEQ ID NO 151):

QVTLRESGPALVKPTQTTLTCTGSGFSLAYSVNWIRQPPGKALEWLA MIWGDGKIVYNSALKSR~~LTISKDTS~~
 KNQVVLTM~~TNMDPVD~~TATYCAVDGYYPYAMD~~NWGGSLVTVSS~~

scFV Candidate #212 (SEQ ID NO 152):

QVTLRESGPALVKPTQTTLTCTVSGFSLAYSVNWIRQPPGKALEWLA MIWGDGKIVYNSALKSR~~LTISKDTS~~
 KNQVVLTM~~TNMDPVD~~TATYCAVDGYYPYAMD~~NWGGSLVTV~~
 SSGGSSRSSGGGGGGGGGDI~~VMTQSPDLSVSLGERATINCRASKSVDSYGNSFMHWYQQKPGQPPKLLI~~
 YLASNLESGVPDRFSGSGSGTDFTLT~~ISSVQAEDVAVYYCQQN~~
 NEDPR~~TFGGG~~TKVEIKR